Honeywell, Inc. Morristown, New Jersey

Technical Letter Report for Groundwater Sampling and Well Abandonment Activities

UOP Site - Area 2 East Rutherford, New Jersey

ENSR Corporation
April 19, 2005
Document Number 0186-127



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Ms. Gwen Zervas Case Manager/Section Chief NJDEP Bureau of Case Management 401 East State Street CN-028 5th Floor, West Wing Trenton, NJ 08625 (609) 633-7261 (ph)

RE: **Technical Letter Report**

> **Groundwater Sampling and Well Abandonment Activities** Universal Oil Products (UOP) - Area 2

East Rutherford, Bergen County, New Jersey

Dear Ms. Zervas:

On behalf of Honeywell International (Honeywell), ENSR International (ENSR) has developed this technical letter report for the results from the groundwater sampling activities and well abandonment activities conducted during January 2005 and April 2005 within Area 2 of the UOP site.

These activities were conducted in accordance with ENSR's Memorandum/Scope of Work, dated November 23, 2004, which was approved by New Jersey Department of Environmental Protection (NJDEP). These activities were conducted in preparation for the proposed closure of shallow groundwater to allow a partial CERCLA delisting specific for Area 2.

This report is divided into the following sections for ease of review:

- 1.0 Purpose
- 2.0 Summary of Fluid Measurements
- 3.0 Groundwater Sampling Methods and Parameters
- 4.0 Shallow Aquifer Classification and Surface Water Quality Standards
- 5.0 Summary of Groundwater Analytical Results
- 6.0 Reliability of Laboratory Data
- 7.0 Summary of Well Abandonment Activities

Complete tables and figures have been provided to supplement this information.



1.0 Purpose

This technical letter report presents data and an evaluation from the groundwater sampling and well abandonment activities conducted during January 2005 and April 2005 within Area 2 of the UOP Site, prior to the completion of the Area 2 redevelopment activities.

2.0 Summary of Fluid Measurements

On January 13, 2005, prior to well sampling, a synoptic round of groundwater elevations were collected from the two existing monitoring wells and four groundwater collection points located across Area 2. Monitoring Well MW-41 could not be accurately gauged due to damage to the well casing. Groundwater elevations ranged from 4.21 (MW-5I) to 1.86 (S15) feet above mean sea level. Due to their construction as temporary extraction trenches, the four groundwater collection points gauged for shallow groundwater elevation are denoted by an asterisk. A site plan depicting the groundwater elevations is provided as Figure 1.

The presence of light, non-aqueous phase liquid (LNAPL) was investigated in all wells gauged using an interface probe. During the gauging event, no LNAPL accumulations or sheens were observed/detected in any of the wells or collection points.

Figure 1 depicts the location of the monitoring wells and groundwater collection points. Table 1 presents the ground water elevation data collected from the shallow groundwater aquifer.

3.0 Groundwater Sampling Methods and Parameters

On January 13 and 14, 2005, groundwater samples were collected from the two monitoring wells 4I, 5I and the four groundwater collection points S14, S15, S16, S17. Samples were delivered to the Severn-Trent Laboratory (STL) in Edison, NJ for analysis (NJDEP lab certification no. 12028).



All groundwater samples were collected in accordance with the NJDEP Field Sampling Procedures Manual (May 1992) and ENSR's Scope of Work, dated November 23, 2004. The low flow sampling method was employed for samples analyzed for metals and PCB's. The conventional sampling method was employed for samples to be analyzed for volatile organic compounds. All groundwater samples were transferred from sampling equipment to laboratory supplied bottles, appropriately preserved and placed on ice, and transported to STL. All samples were analyzed for volatile organic compounds plus a library search (VO +10) using EPA Method 624, polychlorinated biphenyls (PCB's - totals and dissolved) using EPA Method 608, and metals (totals and dissolved) using EPA Method 600. For quality control purposes, two field blanks (sample IDs: F011305, F011405), and one duplicate (5IA) were collected and analyzed for the same parameters. Two trip blanks (sample IDs: T11305, T011405) were analyzed for VO+10.

Field measurements (pH, temperature, dissolved oxygen, conductivity, turbidity, and oxidation-reduction potential) that were collected during well purging are presented in Table 2. Copies of the field sampling data logs for the January 2005 sampling event have been provided in Appendix A.

4.0 Shallow Aquifer Classification and Surface Water Quality Standards

The shallow groundwater at the site has been classified as a Class III-B aquifer, non-potable, and hydraulically connected to a saline surface water body. This determination was presented in a NJDEP letter in 1996.

Berry's Creek, the largest water body nearest to the site, and listed on Table 3 of the NJDEP Surface Water Quality Standards, is classified as a FW2-NT/SE 1. This classification would be representative of the smaller water body within the site, Ackerman's Creek, which is a tributary of Berry's Creek. The FW2-NT/SE 1 classification is a designation that combines two classifications. It means a waterway in which there may be salt water/fresh water interface. The exact point of demarcation between the fresh and saline waters must be determined by salinity measurements and is that point where the salinity reaches 3.5 parts per thousand at mean high tide. Berry's Creek is classified as FW2-NT in the fresh portions (salinity less than or equal to 3.5 parts per thousand at mean high tide) and SE 1 in the saline portions. Since the shallow aquifer at the site has been classified as a Class III-B

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aquifer, the NJDEP Surface Water Quality Standards associated with the SE 1 classification are applicable to the shallow groundwater at the site. Therefore, the groundwater analytical results from the January 2005 sampling event have been compared to the SE 1 Classification standards, hereinafter referred to as "Standards".

5.0 Summary of Groundwater Analytical Results

The analytical results of the January 2005 groundwater sampling event are summarized on Table 3 and discussed below.

A copy of the analytical laboratory reports for this sampling event has been provided in Appendix C. As required (NJAC 7:26E-3.13(c)3v), an electronic deliverable in the HAZSITE database format is also provided in Appendix C.

Volatile Organics

Concentrations of volatile organics were not detected in the groundwater samples exceeding the Standards.

Metals

Arsenic: No concentrations of arsenic (totals or dissolved) were detected above the method detection limit (ranging from 3.2 ppb to 3.5 ppb) for arsenic. It should be noted that the Standard for arsenic is 0.136 ppb, which is an order of magnitude below the method detection limit. It is ENSR's understanding that there is no practical and accurate means to quantify the arsenic concentrations at the level of the Standard.

Lead: No concentrations of lead (totals or dissolved) were detected above the Standard for lead. The published dissolved lead Standard is 24 ppb. There is no published Standard for total lead.

PCBs

No concentrations of PCBs (totals or dissolved) were detected above the method detection limit (ranging from 0.20 ppb to 0.30 ppb) for PCBs. It should be noted that the Standard for PCBs is 0.00017, which is three orders of magnitude below the method detection limit. It is

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ENSR's understanding that there is no practical and accurate means to quantify the PCB concentrations at the level of the Standard.

6.0 Reliability of Laboratory Data

Based on review of the laboratory analytical reports, all groundwater data are considered to be valid and useful for decision-making purposes. The sampling results for the field or trip blanks collected during this event did not detect any contamination. Based upon the conformance/non-conformance summaries provided by the laboratory, the data are useable for decision making purposes.

7.0 Summary of Well Abandonment Activities

Seventeen acres of the UOP site, which includes Area 2, are currently under development. As part of the redevelopment, four groundwater collection points (S14, S15, S16 and S17) were abandoned on January 25, 2005 and three monitoring wells (MW-4I, MW-5I, and MW-41) were abandoned on April 13, 2005 by a certified NJ well driller, Advanced Drilling Company of Pittstown, New Jersey. A copy of each Well Abandonment Form has been provided in Appendix B.



Table 1 Summary of Groundwater Elevation Measurements UOP Site - Area 2 January 2005

WELL ID	DATE	CASING ELEVATION (FT)	DEPTH TO WATER (FT)	DEPTH TO PRODUCT (FT)	PRODUCT THICKNESS (FT)	GROUNDWATER ELEVATION (FTAMSL)	PRODUCT ELEVATION (FTAMSL)	CORRECTED ELEVATION (FTAMSL)	PRODUCT RECOVERED (ML)
S14*	1/13/2005	7.57	4,30	*	0	3.27	NA NA	3.27	0
S15*	1/13/2005	7.67	5.81	_	0	1.86	NA NA	1.86	0
S16*	1/13/2005	8.14	5.79	-	0	2.35	NA	2.35	0
S17*	1/13/2005	6.40	4.05	*	0	2.35	NA NA	2.35	0
4	1/13/2005	6.99	4.57		0	2.42	NA NA	2.42	0
5	1/13/2005	6.90	2.69	-	0	4.21	NA NA	4.21	0
41	1/13/2005	7.67	NG	*	NG	NG	NG	NG	NG

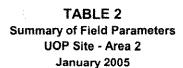
No LNAPL (product) detected

NG - Not gauged.

FT AMSL = feet above mean sea level

Well 41 was damaged.

* - Groundwater Collection Point



Well ID	Date	Time	Purge/Sample Method	Purge Rate L/min	Sample Collection Depth (ft below grade)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temperature (°C)	ORP (mV)	Final DTW after Purge (ft)
S14*	1/13/2005	14:00	WP/PP/Bailer	0.15	4.22	7.20	.779	39	2.74	5.42	-178	4.32
S15*	1/13/2005	12:10	WP/PP/Bailer	0.15	5.01	6.83	3.55	0	3.50	3.94	-182	4.98
S16*	1/14/2005	9:30	WP/PP/Bailer	0.25	7.5	6.71	2.19	41	1.68	7.31	-154	5.57
S17*	1/13/2005	14:50	WP/PP/Bailer	0.25	5	7.38	1.19	22	7.10	6.48	-126	2.21
4	1/14/2005	13:40	PP/Bailer	0.2	13	7.36	2.56	19	0.69	8.72	-207	7.23
5 I	1/14/2005	11.00	PP/Bailer	0.15	10	8.20	1.08	48	1.69	8.00	-228	8.90
41	1/14/2005	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

Note: Field parameter values are shown as recorded by field instrumentation. Measurements were taken either during or immediately preceeding groundwater sampling.

WP=Whale Submersible Pump

PP=Peristaltic Pump

ORP=Oxidation-Reduction Potential

DTW=Depth to Water

NM = Not measured

Well 41 was damaged

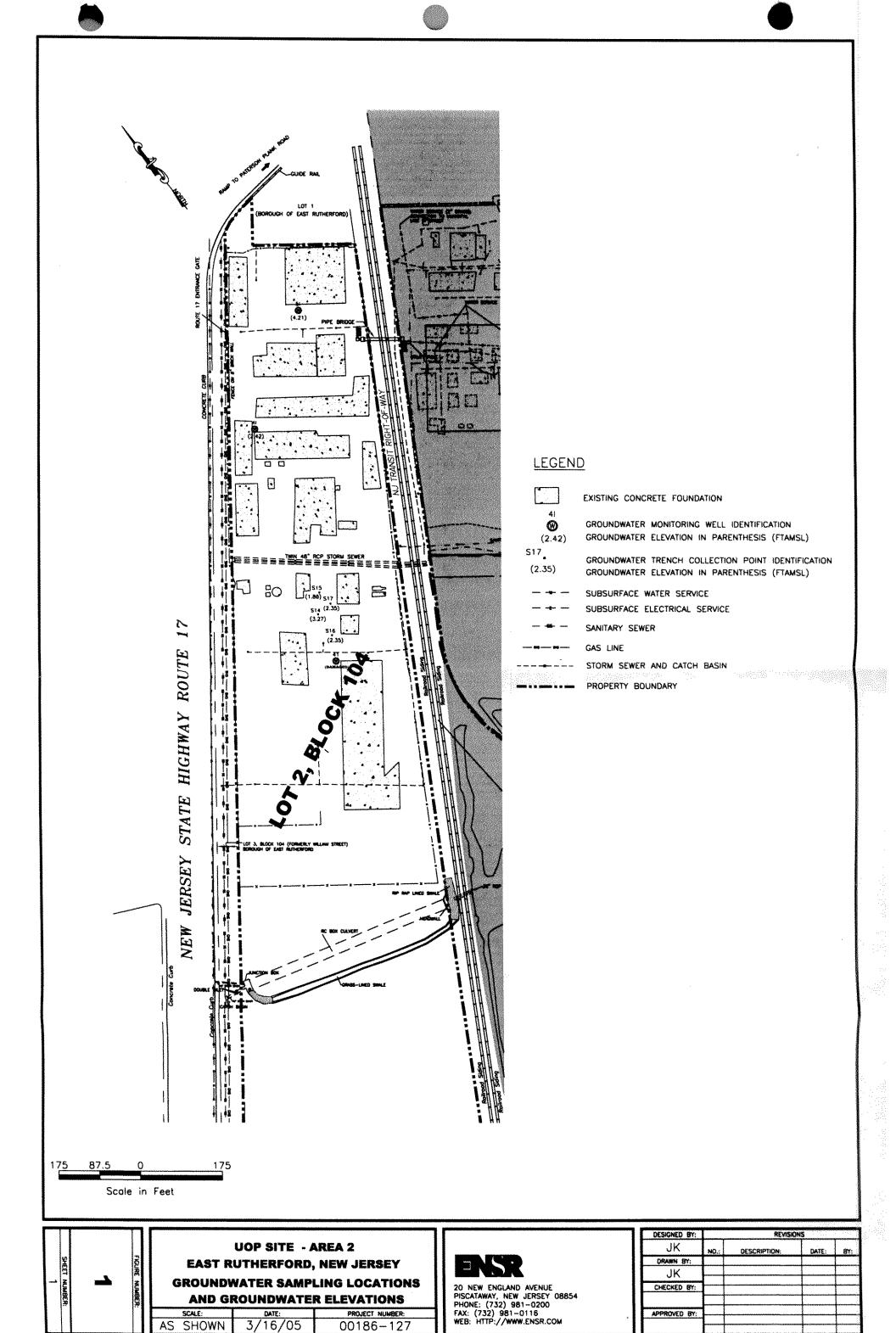
^{* -} Groundwater Collection Point

TABLE 3 Summary of Groundwater Analytical Results UOP Site - Area 2 January 2005

						1.30 (3.00) 1.30 (3.00)	ing and		<u> Sangaran kana sab</u>	<u> Alaman kanin kanin ka</u>					<i>3</i> 1
Sample ID		314*	S14-Dise	815*	\$15-Diss*	Ste	S16-Diss*	S17*	S17-Diss*	4	41-Diss	53	51-Dies	SIA	SIA-Diss
Laboratory ID		600390	600403	600397	600402	600773	600781	600390	600404	600776	600784	600774	600712	600775	600783
Laboratory Job Number	entropy and an area from the property	R810	R810	R810	R810	R885	R885	R810	R810	R885	R\$85	R885	R865	R865	R985
Sample Date	(4) 基本企業 (4) (4) (4) (4) (4) (4)	1/13/2005	1/13/2005	1/13/2005	1/13/2005	1/14/2005	1/14/2005	1/13/2005	1/13/2008	1/14/2005	1/14/2005	1/14/2005	1/14/2005	1/14/2005	1/14/2005
Sample Depth (ft)		2-2.5	2-2.5	5-5.5	5-5.5	7-7.5	7-7.5	5-5.5	5-5.5	13-13.5	13-13.5	10-10.5	10-10.5	10-10.5	10-10.5
Dilution Factor		1	1	1	1	10 Sept 10 Sep	1 ::	1	1	2	1	1	1	1	1 1
Volatile Organic Compounds (VOC															
	SWQS (SE Class.)														
1,1,1-Trichloroethane	NONE	0.3 U	NA	0.3 U	NA	0.3 U	NA .	03U	NA NA	0.6 U	NA NA	0.3 U	NA .	0.3 U	NA NA
1,1,2,2-Tetrachloroethane	NONE	0.5 U	NA NA	0.5 U	NA	0.5 U	NA NA	0.5 U	NA	0.9 U	NA	0.5 U	NA NA	0.5 U	NA NA
1,1,2-Trichloroethane	NONE	0.3 U	NA NA	0.3 U	NA NA	0.3 U	NA	0.3 U	NA NA	0.6 U	NA NA	0.3 U	NA NA	0.3 U	NA NA
1,1-Dichloroethane	NONE	0.4 U	NA NA	0.4 U	NA	0.4 U	NA NA	0.4 U	NA NA	0.7 U	NA	04U	NA NA	0.4 U	
1,1-Dichloroethene	NONE	0.3 U	NA NA	0.3 U	· NA	0.3 U	NA .	0.3 U	NA NA	0.7 U	NA NA	0.3 U	NA NA	0.3 U	NA NA
1,2-Dichloroethane	99	0.4 U	NA NA	0.4 U	NA NA	0.4 U	NA -	04U	NA NA	0.7 U	NA	0.4 U	NA NA	0.4 U	NA NA
1,2-Dichloropropane	NONE	0.4 U	NA NA	0.4 U	NA	0.4 U	NA NA	040	NA NA	0.7 U	NA	0.4 U	NA NA	0.4 U	NA NA
2-Chloroethyl Vinyl Ether	NONE	0.4 U	NA NA	0.4 U	NA NA	0.4 U	NA NA	0.4 U	NA	0.7 U	NA .	040	NA NA	0.4 U	NA NA
Benzene	71	0.3 U	NA NA	2.3	NA NA	0.3 U	NA NA	0.3 U	NA	26	NA	03U	NA NA	0.3 U 0.3 U	NA NA
Bromodichloromethane	22	0.3 U	NA NA	0.3 U	NA NA	0.3 U	NA NA	0.3 U	NA NA	0.6 U	NA	03U	NA NA	0.3 U	NA NA
Bromoform	360	0.3 U	NA NA	0.3 U	NA NA	0.3 U	NA NA	0.3 U	NA	0.5 U	NA NA	030	<u> </u>	0.3 U	NA NA
Bromomethane (Methyl Bromide)	4,000	0.3 U	NA NA	0.3 U	NA	0.3 U	NA NA	0.3 U	NA NA	0.7 U	NA .	0.3 U	NA NA		NA NA
Carbon Tetrachloride	6.31	0.3 U	NA NA	0.3 U	NA	0.3 U	NA NA	0.3 U	NA NA	0.6 U	NA NA	030	NA NA	0.3 U 0.3 U	NA NA
Chlorobenzene	21,000	0.3 Ú	NA NA	0.3	NA NA	0.3 U	NA NA	0.3 U	NA	280	NA NA	0.3 U 0.4 U	<u> </u>	0.3 U	NA NA
Chloroethane	NONE	0.4 U	NA NA	0.4 U	NA NA	0.4 U	NA .	0.4 U	NA NA	0.7 U	NA		NA NA	0.4 U	NA NA
Chloroform	470	0.3 U	NA NA	0.3 U	NA	0.3 U	NA NA	0.3 U	NA NA	0.7 U	NA NA	0.3 U 0.4 U	NA NA	0.3 U	NA NA
Chloromethane	NONE	0.4 U	NA NA	0.4 U	NA	0.4 U	NA NA	0.4 U	NA	0.8 U	NA NA	0.4 U	NA NA	0.4 U	NA NA
cis-1,2-Dichloroethene	NONE NONE	0.9 0.3U	NA NA	0.4 U 0.3 U	NA NA	0.4 U	NA NA	1.3 0.3 U	NA NA	0.9 0.5 U	- NA	0.4 U	NA NA	0.4 U	NA NA
cis-1,3-Dichloropropene Dibromochloromethane	NONE	0.3U	NA NA	0.3 U	NA NA	0.3 U 0.2 U	NA NA	0.3 U	NA NA	0.5 U	NA NA	0.3 U	NA NA	0.3 U	NA NA
Ethylbenzene	27.900	0.2 U	NA NA	0.2 U	NA NA	0.2 U	NA NA	0.2 U	NA NA	1.1	NA NA	0.2 U	NA NA	0.2 U	NA NA
Methylene Chloride	1,600	0.3 U	NA NA	0.3 U	NA NA	0.9 U	NA NA	2.1	NA NA	1.1 1.8 U	NA NA	0.9 U	NA I	0.9 U	NA NA
Tetrachloroethene	4.29	0.9 U	NA NA	0.9 U	NA NA	0.4 U	NA.	0.4 U	NA NA	0.7 U	NA NA	0.4 U	NA NA	0.4 U	NA NA
Toluene	200,000	1.8	NA NA	91	NA NA	0.7	NA NA	1.2	NA NA	4.2	NA NA	0.3 U	NA NA	0.3 U	NA NA
trans-1,2-Dichloroethene	NONE	0.3 U	NA NA	0.3 U	NA NA	0.3 U	NA NA	0.3 U	NA NA	0.9	NA NA	0.3 U	NA NA	0.3 U	NA NA
trans-1.3-Dichloropropene	NONE	0.4 U	NA NA	0.4 U	NA NA	0.4 U	NA NA	0.4 U	NA NA	0.7 U	NA NA	0.4 U	NA NA	0.4 U	NA NA
Trichloroethene	81	0.4 U	NA NA	0.4 U	NA NA	0.4 U	NA NA	0.4 U	NA NA	0.8 U	NA NA	0.4 U	NA NA	0.4 U	NA NA
Trichlorofluoromethane	NONE	0.4 U	NA	0.4 U	NA NA	0.4 U	NA NA	0.4 U	NA	0.7 U	NA NA	0.4 U	NA	0.4 U	NA
Vinvi Chloride	525	0.4 U	NA	0.4 U	NA	0.4 U	ÑĀ	0.4 U	NA	7.8	NA	0.4 U	NA	0.4 U	NA NA
Xviene (Total)	NONE	0.2 U	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	0.8	NA	0.2 U	NA	0.2 U	NA
Total TICs	NONE	4.2	NA	3.2	NA	16	NA	0.0	NA	254	NA NA	0.0	NA	0.0	NA NA
Total VOCs	NONE	2.7	NA	93.6	NA	0.7	. NA	4.6	NA	321.7	NA	0.0	NA	0.0	NA
METALS															
Arsenic	0.136	3.2 U	3.2 U	3.2 U	3.2 U	3.5 U	3.5 U	3.2 U	3.2 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Lead	NONE (Total), 24 (Diss)	17.9	11.9	2.6 U	2.6 U	2.2 U	2.2 U	6.1	2.6 U	2.2 U	2.2 U	22U	2.2 U	2.2 U	2.2 U
Pesticides/PCBs															
Aroclor-1016	0.00017	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221	0.00017	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Aroclor-1232	0.00017	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Aroclor-1242	0.00017	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0 20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1248	0.00017	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 ∪	0.30 U	0.30 U
Arocior-1254	0.00017	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1260	0.00017	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Aroclor-1262	0.00017	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 ∪	0.30 U	0.30 U
Aroclor-1268	0.00017	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
															

Notes:

- 1. All concentrations are in ug/L (ppb)
- All samples were analyzed by STL in Edison, NJ
 Groundwater analytical results have been compared to NJDEP Surface Water Quality Standards (SE Classification)
- 4. Sample MW-5IA and MW-5IA Diss is a duplicate sample of MW-5I and MW-5I Diss, respectively.
- 5. U The compound was not detected at the indicated concentration/Method detection limit.
- 7. Diss Dissolved
- 8. NONE There is no NJDEP Surface Water Quality Standards (SE Classification) published for that constituent
- 9. * Groundwater Collection Point



ENSR	Groundwater Purging and	Well ID #: <u>\$14</u>	Page _ 1 _ of _ 1
	Sampling Field Log	Date: 1/13/05	
Site Location: Honeywe	II (UOP) E. Rutherford, NJ	SITE OBSERV	/ATIONS (circle)
Street Address: Rout	e 17 N. City: E. Rutherford State: NJ	1) Was well locked upon an	ival? Yes No
Client Name: <u>Honeywell</u>	(UOP) Project Number: 00186-127-004	2) Was structural integrity g	ood? (Yes No
		3) Were any unusual condit	ions observed? Yes No
N	JDEP Laboratory Certification #: 12995	(i.e. odors, staining, unusual	site activities, etc.)
Personnel: J.Holzer/B.	Yagel	Yes	(No)

Purging and Sampling Details

Well Data and Volume Calculations

Purging Volume of Well Diameter (in): 12 inches Low Flow Method: Standing Depth to Water (ft): 4.3 feet Water (gal): 35.00 gallons Purge Times: 13:40 14:10 to Minimum Sampling 14:00 Depth to Bottom (ft): 10.24 feet Times: Volume to Height of Water be Purged Analytical Total and Dissolved Metals (As, Pb), 5.94 feet 105.00 gallons Column (ft): (gal): Parameters: Total and Dissolved PCB's, VO+10 Before **Before** Sample Purge **During Purge** 13:40 13:43 13:47 13:50 13:54 13:57 Time Depth to Water (ft.) 4.23 4.23 4.3 4.32 4.32 4.32 pH (SU) 7.17 7.17 7.17 7.18 7.19 7.20 Temp. (oC) 5.26 5.27 5.29 5.33 5.39 5.42 DO (mg/l) 2.19 2.25 2.44 2.69 2.72 2.74 Cond. (S/cm) .778 .777 0.778 777 779 0.779 Turbidity (Ntu) 39 39 38 38 39 39 ORP (mV) -172 -176 -176 -176 -177 -178 Est. Purge Vol. (gal.) Total = 2 gals via low flow Purge Rate (L/min.) 150 ml/min 150 ml/min | 150 ml/min 150 ml/min 150 ml/min PID (ppm) Notes: Water is clear and odorless throughout purge.

Groundwater Purging and Sampling Field Log	Well ID #: <u>S15</u> Date: 1/13/05	Page <u>1</u> of <u>3</u>
Site Location: Honeywell (UOP) E. Rutherford, NJ	SITE OBSERV	'ATIONS (circle)
Street Address: Route 17 N. City: E. Rutherford State: NJ	1) Was well locked upon arr	ival? Yes No
Client Name: Honeywell (UOP) Project Number: 00186-127-004	2) Was structural integrity g	ood? Yes No
	3) Were any unusual conditi	ons observed? Yes No
NJDEP Laboratory Certification #: 12995	(i.e. odors, staining, unusual	site activities, etc.)
Personnel: J.Holzer/B.Yagel	Yes	No

Well Data and Volume Calculations **Purging and Sampling Details** Purging Well Diameter (in): 12 inches Volume of Low Flow Method: Standing Depth to Water (ft): 5.81 feet Water (gal): 18.00 gallons Purge Time: 10.40 13:30 to Minimum Sampling Depth to Bottom (ft): 12:10 8.98 feet Volume to Times: Height of Water be Purged Analytical 3.17 feet 54.00 gailons Total and Dissolved Metals (As, Pb), Column (ft): (gal): Parameters: Total and Dissolved PCB's, VO+10

	Before Purge		·•	***************************************	Durin	g Purge			
Time	10:40	10:44	10:47	10:50	10:53	10:58	11:02	11:05	11:09
Depth to Water (ft.)	5.16	5.12	5.12	5.12	5.13	4.96	4,98	4.98	4.98
pH (SU)	7.03	7.04	7.06	7.06	7.07	7.02	7.08	7.08	7.09
Temp. (oC)	4.08	4.76	4.36	4.47	4.40	4.67	4.66	4.45	4.42
DO (mg/l)	1.04	1.09	1.24	1.26	1.70	3.43	1.57	1,38	1,40
Cond. (S/cm)	3.32	3.39	3.35	3.34	3,35	3.10	3,25	3.30	3.34
Turbidity (Ntu)	0.0	-10.0	-10.0	-10.0	-10.0	0.0	0.0	0.0	0.0
ORP (mV)	-190	-192	-192	-192	-190	-175	-189	-191	-193
Est. Purge Vol. (gal.)									
Purge Rate (L/min.)	150 ml/min	150 ml/min	150 ml/min	150 ml/min	150 ml/min	150 ml/min	150 ml/min	150 ml/min	150 ml/min
PID (ppm)									
Notes:	Water is clea	ir and odori	ess. Stoppe	ed purge at	10:55 to clea	n flow throug	h cell. Re-s	started pump	o at 10:57.

Volume Conversion Factors: 2" - x 0.16 gallons per linear foot, 4" - x 0.65, 6" - x 1.47, 8" - x 2.61 Low Flow targets: DO +/- 10%; Temp +/- 3%; pH +/- 0.1; Cond +/- 3%; Turb +/- 10%; ORP +/- 10 mV.

Groundwater Purging and Sampling Field Log	Well ID #: <u>\$15</u> Date: 1/13/05	Page <u>2</u> of <u>3</u>
Site Location: Honeywell (UOP) E. Rutherford, NJ	SITE OBSERV	ATIONS (circle)
Street Address: Route 17 N. City: E. Rutherford State: NJ	1) Was well locked upon arri	val? Yes No
Client Name: Honeywell (UOP) Project Number: 00186-127-004	2) Was structural integrity go	od? (Yes) No
	3) Were any unusual condition	ons observed? Yes No
NJDEP Laboratory Certification #: 12995	(i.e. odors, staining, unusual	site activities, etc.)
Personnel: J.Holzer/B.Yagel	Yes	(No)

Well Data and Volume Calculations Purging and Sampling Details Purging Volume of 12 inches Well Diameter (in): Low Flow Method: Standing Purge Time: Depth to Water (ft): 5.81 feet Water (gai): 18.00 gallons 10:40 to 13:30 Minimum Sampling 12:10 Depth to Bottom (ft): 8.98 feet Volume to Times: Height of Water be Purged Analytical 3.17 feet 54.00 gallons Total and Dissolved Metals (As, Pb), Column (ft): (gal): Parameters: Total and Dissolved PCB's, VO+10

				During Pur	<u>je </u>			
11:12	11:15	11:30	11:33	11:36	11:39	11:42	11:46	11:49
4.98	4.98	4.96	4.98	4.98	4.98	4.98	4.98	4.98
7.11	3.92	6.40	6.55	6.66	6.75	6.78	6.80	6.82
4.43	4.47	4.34	4.43	4.42	4.36	4.23	4.19	4,20
1.80	14.43	2.03	1.79	2.22	2.59	2.63	2.78	2.60
3.36	4.70	3.41	3.42	3.42	3.41	3.43	3.44	3.45
0.0	-4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-190	109	-153	-168	-175	-178	-180	-181	-182
150 ml/min	150 ml/min	150 ml/min	150 ml/min	150 ml/min	150 ml/min	150 ml/min	150 ml/min	150 ml/min
Stopped pur	ge at 11:15	to re-calibra	ite Horriba.	Re-started	pump at 11:2	4. Water is	clear and o	dorless.
	4.98 7.11 4.43 1.80 3.36 0.0 -190	4.98 4.98 7.11 3.92 4.43 4.47 1.80 14.43 3.36 4.70 0.0 -4.0 -190 109 150 ml/min 150 ml/min	4.98 4.98 4.96 7.11 3.92 6.40 4.43 4.47 4.34 1.80 14.43 2.03 3.36 4.70 3.41 0.0 -4.0 0.0 -190 109 -153 150 ml/min 150 ml/min 150 ml/min	4.98 4.98 4.96 4.98 7.11 3.92 6.40 6.55 4.43 4.47 4.34 4.43 1.80 14.43 2.03 1.79 3.36 4.70 3.41 3.42 0.0 -4.0 0.0 0.0 -190 109 -153 -168 150 ml/min 150 ml/min 150 ml/min 150 ml/min	11:12 11:15 11:30 11:33 11:36 4.98 4.98 4.96 4.98 4.98 7.11 3.92 6.40 6.55 6.66 4.43 4.47 4.34 4.43 4.42 1.80 14.43 2.03 1.79 2.22 3.36 4.70 3.41 3.42 3.42 0.0 -4.0 0.0 0.0 0.0 -190 109 -153 -168 -175 150 ml/min 150 ml/min 150 ml/min 150 ml/min 150 ml/min	4.98 4.98 4.96 4.98 4.98 4.98 7.11 3.92 6.40 6.55 6.66 6.75 4.43 4.47 4.34 4.43 4.42 4.36 1.80 14.43 2.03 1.79 2.22 2.59 3.36 4.70 3.41 3.42 3.42 3.41 0.0 -4.0 0.0 0.0 0.0 0.0 -190 109 -153 -168 -175 -178 150 ml/min 150 ml/min 150 ml/min 150 ml/min 150 ml/min 150 ml/min	11:12 11:15 11:30 11:33 11:36 11:39 11:42 4.98 4.98 4.98 4.98 4.98 4.98 4.98 7.11 3.92 6.40 6.55 6.66 6.75 6.78 4.43 4.47 4.34 4.43 4.42 4.36 4.23 1.80 14.43 2.03 1.79 2.22 2.59 2.63 3.36 4.70 3.41 3.42 3.42 3.41 3.43 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 -190 109 -153 -168 -175 -178 -180 150 ml/min 150 ml/min 150 ml/min 150 ml/min 150 ml/min 150 ml/min 150 ml/min	11:12 11:15 11:30 11:33 11:36 11:39 11:42 11:46 4.98 4.98 4.98 4.98 4.98 4.98 4.98 4.98 7.11 3.92 6.40 6.55 6.66 6.75 6.78 6.80 4.43 4.47 4.34 4.43 4.42 4.36 4.23 4.19 1.80 14.43 2.03 1.79 2.22 2.59 2.63 2.78 3.36 4.70 3.41 3.42 3.42 3.41 3.43 3.44 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 -181 -190 109 -153 -168 -175 -178 -180 -181

Volume Conversion Factors: 2" - x 0.16 gallons per linear foot, 4" - x 0.65, 6" - x 1.47, 8" - x 2.61

Low Flow targets: DO +/- 10%; Temp +/- 3%; pH +/- 0.1; Cond +/- 3%; Turb +/- 10%; ORP +/- 10 mV.

Groundwater Purging and Sampling Field Log	Well ID #: <u>\$15</u> Date: 1/13/05	Page <u>3</u> of <u>3</u>
Site Location: Honeywell (UOP) E. Rutherford, NJ	SITE OBSERV	'ATIONS (circle)
Street Address: Route 17 N. City: E. Rutherford State: NJ	1) Was well locked upon am	ival? Yes No
Client Name: Honeywell (UOP) Project Number: 00186-127-004	2) Was structural integrity go	ood? Yes No
	3) Were any unusual conditi	ons observed? Yes No
NJDEP Laboratory Certification #: 12995	(i.e. odors, staining, unusual	site activities, etc.)
Personnel: J.Hoizer/B.Yagel	Yes	No)

12 inches Volume of Standing Purging Method: Low Flow 5.81 feet Water (gal): 18.00 gallons Purge Time: 10:40 to 13:30

Purging and Sampling Details

Total and Dissolved PCB's, VO+10

Depth to Water (ft): 5.81 feet Minimum Sampling Depth to Bottom (ft): 8.98 feet 12:10 Volume to Times: Height of Water be Purged Analytical 3.17 feet 54.00 gallons Column (ft): (gal): Parameters: Total and Dissolved Metals (As, Pb),

Well Data and Volume Calculations

Well Diameter (in):

				Durin	g Purge			Before Sample
Time	11:53	11:57	12:00	12:03				12:06
Depth to Water (ft.)	4.98	4.98	4.98	4.98				4.98
pH (SU)	6.83	6.85	6.85	6.82				6.83
Temp. (oC)	4.06	4.08	3.90	3.92				3.94
DO (mg/l)	2.75	3.68	3.52	3.51				3.50
Cond. (S/cm)	3.45	3.46	3.50	3.58				3.55
Turbidity (Ntu)	11	1	0.0	0.0				0.0
ORP (mV)	-184	-183	-182	-183				-182
Est. Purge Vol. (gal.)							Total = 5 gals	s via low flow
Purge Rate (L/min.)	150 mi/min	150 ml/min	150 ml/min	150 ml/min	150 ml/min			
PID (ppm)								
Notes:	Water was c	ear and od	orless throu	ghout purge	-			

Volume Conversion Factors; 2" - x 0.16 gallons per linear foot, 4" - x 0.65, 6" - x 1.47, 8" - x 2.61 Low Flow targets: DO +/- 16%; Temp +/- 3%; pH +/- 0.1; Cond +/- 3%; Turb +/- 10%; ORP +/- 10 mV.

Groundwater Purging and Sampling Field Log	Well ID #: <u>\$16</u> Date: 1/14/05	Page <u>1</u> of <u>2</u>
Site Location: Honeywell (UOP) E. Rutherford, NJ	SITE OBSERV	ATIONS (circle)
Street Address: Route 17 N. City: E. Rutherford State: NJ	1) Was well locked upon am	
Client Name: Honeywell (UOP) Project Number: 00186-127-004	Was structural integrity go Were any unusual conditi	
NJDEP Laboratory Certification #: 12995	(i.e. odors, staining, unusual	site activities, etc.)
Personnel: J.Holzer/B.Yagel	Yes	(No)

Well Data and Volume Calculations **Purging and Sampling Details** Purging Well Diameter (in): Volume of 12 inches Low Flow Method: Standing Depth to Water (ft): 5.59 feet Water (gal): 27.73 gallons Purge Times: 8:52 10:15 to Minimum Sampling Depth to Bottom (ft): 10.31 feet 9:30 Volume to Times: Height of Water be Purged Analytical 4.8 feet 83.19 gallons Column (ft): Total and Dissolved Metals (As, Pb). (gal): Parameters:

Total and Dissolved PCB's, VO+10

	Before Purge				Durir	ıg Purge			
Time	8:52	8:55	8:58	9:01	9:04	9:07	9:10	9:13	9:16
Depth to Water (ft.)	5.56	5.56	5.57	5.57	5.57	5.57	5.57	5.57	5.57
pH (SU)	6.31	6.41	6.51	6.57	6.62	6.65	6.68	6.69	6.70
Temp. (oC)	7.69	7.43	7.48	7.42	7.73	7.34	7.33	7.31	7.33
DO (mg/l)	2.10	1.89	1.82	1.78	1.74	1.73	1.72	1.71	1.69
Cond. (S/cm)	2.27	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19
Turbidity (Ntu)	44	44	39	49	55	61	69	51	46
ORP (mV)	-106	-117_	-128	-136	-142	-146	-150	-151	-152
Est. Purge Vol. (gal.)									
Purge Rate (L/min.)	250 ml/min	250 ml/min	250 ml/min	250 ml/min	250 ml/min	250 ml/min	250 ml/min	250 ml/min	250 ml/min
PID (ppm)									
Notes:	Water is clea	ar and odor	ess.						

Groundwater Purging and Sampling Field Log	Well ID #: <u>\$16</u> Date: 1/14/05	Page <u>2</u> of <u>2</u>
Site Location: Honeywell (UQP) E. Rutherford, NJ	SITE OBSERV	ATIONS (circle)
Street Address: Route 17 N. City: E. Rutherford State: NJ	1) Was well locked upon arr	ival? Yes No
Client Name: Honeywell (UOP) Project Number: 00186-127-004	2) Was structural integrity go	od? Yes No
	3) Were any unusual conditi	ons observed? Yes No
NJDEP Laboratory Certification #: 12995	(i.e. odors, staining, unusual	site activities, etc.)
Personnel: J.Holzer/B.Yagel	Yes	No

Well Data and Volume Calculations Purging and Sampling Details Purging Volume of Well Diameter (in): 12 inches Low Flow Method: Standing Purge Times: Depth to Water (ft): 5.59 feet Water (gal): 27.73 gallons 8:52 10:15 Minimum Sampling Depth to Bottom (ft): 10.31 feet 9:30 Volume to Time: Height of Water be Purged Analytical 4.8 feet 83.19 gallons Total and Dissolved Metals (As, Pb), Column (ft): (gal): Parameters: Total and Dissolved PCB's, VO+10

				Durin	g Purge			Before Sample
Time	9:19							9:19
Depth to Water (ft.)	5.57		***************************************					5.57
pH (SU)	6.71							6.71
Temp. (oC)	7.31		***************************************					7.31
DO (mg/l)	1.68							1.68
Cond. (S/cm)	2.19							2.19
Turbidity (Ntu)	41		······································		***************************************	 		41
ORP (mV)	-154							-154
Est. Purge Vol. (gal.)							Total = 3 gals	s via low flow
Purge Rate (L/min.)	250 ml/min							
PID (ppm)								
Notes:	Water was cl	ear and odo	orless throug)hout purge				

Groundwater Purging and Sampling Field Log	Well ID #: <u>S17</u> Date: 1/13/05	Page <u>1</u> of <u>1</u>
Site Location: Honeywell (UOP) E. Rutherford, NJ	SITE OBSERV	ATIONS (circle)
Street Address: Route 17 N. City: E. Rutherford State: NJ Client Name: Honeywell (UOP) Project Number: 00186-127-004	Was well locked upon arriv Was structural integrity go	
One in the interest of the int	Were any unusual condition	
NJDEP Laboratory Certification #: 12995	(i.e. odors, staining, unusual s	site activities, etc.)
Personnel: J.Holzer/B.Yagel	Yes	(No)

Well Data and Volume Calculations

Volume of

12 inches

Purging and Sampling Details

Low Flow

Purging

Well Diameter (in): Method: Standing Depth to Water (ft): 4.05 feet Water (gal): 45.00 gallons Purge Times: 14:25 16:15 to Sampling 9.25 feet Minimum 14:50 Depth to Bottom (ft): Times: Volume to be Height of Water Analytical Total and Dissolved Metals (As, Pb), 5.2 feet Purged (gal): 135.00 gallons Column (ft): Parameters: Total and Dissolved PCB's, VO+10 Before **Before** Sample Purge **During Purge** 14:30 14.33 14:36 14:39 14:42 14:45 14:45 Time Depth to Water (ft.) 2.2 2.21 2.21 2.21 2.21 2.21 2.21 pH (SU) 7.27 7.30 7.32 7.34 7,35 7.38 7.38 6.22 Temp. (oC) 6.19 6.31 6.41 6.43 6.48 6.48 DO (mg/l) 6.57 6.80 6.95 6.19 7.00 7.10 7.10 Cond. (S/cm) 1,23 1.22 1.21 1.21 1.20 1.19 1.19 Turbidity (Ntu) 24 23 23 27 22 22 22 ORP (mV) -139 -136 -134 -132 -129 -126 -126 Est. Purge Vol. (gal.) Total = 3 gals via low flow Purge Rate (L/mln.) 250 ml/min 250 ml/min 250 ml/min 250 ml/min 250 ml/min 250 ml/min PID (ppm) Notes: Water is clear and odorless.

Volume Conversion Factors: 2" - x 0.16 gallons per linear foot, 4" - x 0.65, 6" - x 1.47, 8" - x 2.61 Low Flow targets, DO +/- 10%; Temp +/- 3%; pH +/- 0.1; Cond +/- 3%; Turb +/- 10%; QRP +/- 10 mV

Groundwater Purging and Sampling Field Log	Well ID #: <u>4 </u> Date: 1/14/05	Page <u>1</u> of <u>1</u>
Site Location: <u>Honeywell (UOP)</u> E. Rutherford, NJ	SITE OBSERV	ATIONS (circle)
Street Address: Route 17 N. City: E. Rutherford State: NJ	1) Was well locked upon arriv	val? (Yes No
Client Name: Honeywell (UOP) Project Number: 00186-127-004	2) Was structural integrify go	od? Yes No
	3) Were any unusual condition	ons observed? Yes No
NJDEP Laboratory Certification #: 12995	(i.e. odors, staining, unusual s	site activities, etc.)
Personnel: J.Holzer/B.Yagel	Yes	(No)

Well Data and Volume Calculations **Purging and Sampling Details** Purging Volume of Well Diameter (in): 2 inches Low Flow Method: Standing Purge Times: Depth to Water (ft): 4.27 feet Water (gal): 2.33 gallons 13:10 to 14:15 Sampling Depth to Bottom (ft): 18,82 feet Minimum 13:40 Time: Volume to be Height of Water Analytical Total and Dissolved Metals (As. Pb), 14.55 feet Purged (gal): 6.98 gallons Parameters: Column (ft): Total and Dissolved PCB's, VO+10 Before Before Sample **During Purge** Purge Time 13:10 13:13 13:15 13:18 13:20 Depth to Water (ft.) 6.45 6.6 6.65 7.1 7.23 pH (SU) 7.54 7.47 7.44 7.41 7.36 8.64 8.84 8.85 8.85 Temp. (oC) 8.72 DO (mg/l) 1.26 0.90 0.78 0.70 0.69 Cond. (S/cm) 2.54 2.56 2.55 2.55 2.56 16 Turbidity (Ntu) 13 11 24 19 ORP (mV) -190 -198 -201 -204 -207 Est. Purge Vol. (gal.) Total = 2 gals via low flow Purge Rate (L/min.) 200 ml/min 200 ml/min 200 ml/min | 200 ml/min PID (ppm) Water is clear and odorless. Notes:

Groundwater Purging and Sampling Field Log	Well ID #: <u>5 l</u> Date: 1/14/05	Page <u>1</u> of <u>1</u>
Site Location: Honeywell (UOP) E. Rutherford, NJ	SITE OBSERV	ATIONS (circle)
Street Address: Route 17 N. City: E. Rutherford State: NJ	1) Was well locked upon arr	ival? Yes No
Client Name: Honeywell (UOP) Project Number: 00186-127-004	2) Was structural integrity go	ood? Yes No
	3) Were any unusual conditi	ons observed? Yes No
NJDEP Laboratory Certification #: 12995	(i.e. odors, staining, unusual	site activities, etc.)
Personnel: J.Holzer/B.Yagel	Yes	No No

Well Data and Volume Calculations **Purging and Sampling Details** Purging Well Diameter (in): 2 inches Volume of Low Flow Method: Standing Depth to Water (ft): 2.67 feet Water (gal): 2.50 gallons Purge Times: 10:29 to 12:15 Minimum Sampling 17.26 feet 11:00 Depth to Bottom (ft): Volume to Time: Height of Water be Purged Analytical Total and Dissolved Metals (As. Pb), 14.59 feet 7.50 gallons Parameters: Column (ft): (gal): Total and Dissolved PCB's, VO+10 Before Before Sample Purge **During Purge** 10:29 10:34 10:37 10:40 10:43 10:47 Time Depth to Water (ft.) 8.27 8.30 8.40 8.60 8.90 8.90 pH (SU) 7,57 7.74 8.00 8.10 7.45 8.20 Temp. (oC) 9.78 10.30 9.61 8.36 8.3 8.0 DO (mg/l) 3.01 1.68 1.20 1.20 1.70 1.69 Cond. (S/cm) 1.83 1.83 1.79 1.08 1.06 1.080 Turbidity (Ntu) 80 56 160 170 74 48 -230 -232 -232 -227 ORP (mV) -217 -228 Est. Purge Vol. Total = 7 gals via low flow (gal.) Purge Rate (L/min.) 300 ml/min 300 ml/min 150 ml/min 150 ml/min 150 ml/min PID (ppm) Notes: Water is odorless and light gray. Purge stopped at 10:37 to adjust Horriba flow through cell and purge rate to 100 ml/min. Re-start pump at 10:40.

Volume Conversion Factors: 2" - x 0.16 gallons per linear foot, 4" - x 0.65, 6" - x 1.47, 8" - x 2.61 Low Flow targets: DO +/- 10%; Temp +/- 3%; pH +/- 0.1; Cond +/- 3%; Turb +/- 10%; ORP +/- 10 mV. DWR-020 7/02 New Jersey Department of Environmental Protection Water Supply Element - Bureau of Water Allocation

MAIL TO: Bureau of Water Allocation		WELL PE	RMIT # LIDLXE
PO Box 426 Trenton, NJ 08625-0426	•	DATE WELL SEALED /-	of well sealed
	THE	the source legisles sale self asprops. While appropriate self-self self-self self-self self-self self-self self-self	n tops and made and and tops and tops tops tops tops tops tops
PROPERTY OWNER ENGLISHED			VO. LUC.
ADDRESS PO BOX 1/39 /	WELLSTON	UN. NJ 67962	
WELL LOCATION RT 17 NOVIH Street & No., Town		PUTHERFORD BERG	EN COUNTY
S14		2	104
Well No.		Lot No.	Block No.
USE OF WELL PRIOR TO ABANDONMENT	COLLECTI	on POINT	
REASON FOR ABANDONMENT: 100 1	DNGER K	EDUKED	
WAS A NEW WELL DRILLED? YES	(NO	PERMIT # OF NEW WE	ELL
TOTAL DEPTH OF WELL DIAMETER CASING LENGTH	Cross-section of sealed well	Draw a sketch showing distance and nearest roads, buildings, etc.	
SCREEN LENGTH NUMBER OF CASINGS MATERIAL USED TO DECOMMISSION WELL:		The second	De Care
Gallons of Water Lbs. of Cement Lbs. of Bentonite	8' X/8"	AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM	A N
Lbs. of Sand/Gravel 8) 00//01 (none if well is contaminated)		STATE PLACE COORDINATE IN US SUI	<i>)</i>
FORMATION: Consolidated Unconsolidated		THING: EASTING:OR) N
To permit adequate grouting, the casing should re- be removed. Pressure grouting is the only accepted	ed method.		
WAS CASING LEFT IN PLACE? YES	lno casi	ng material <i>COLLUGATE</i>	O PLASTIC
WERE OTHER OBSTRUCTIONS LEFT IN WE	LL? DYES X	O WHAT WERE THE OBSTRUCT	TIONS: <u>/////</u>
IF "YES", AUTHORIZATION GRANTED BY	•		
Was an alternative decommissioning method used	(NJD) and/or approval to	decommission granted by a DEP offic	(Date) ial? YES NO
IF "YES", authorization granted by		ON	
I certify that this well was sealed in accordance		~~~~	(Date) -2-17-05
Parforming Work (Print or Type) ae of NJ Licensed Well Driller	Calaco	OWALANS USSO!	Mailing Date
Si	gnature of NJ Lices	nsed Well Driller Performing Work	Registration #

DWR-020 7/02

New Jersey Department of Environmental Protection Water Supply Element - Bureau of Water Allocation

MAIL TO: Bureau of Water Allocation		WELL PERM	
PO Ret 426		DATE WELL SEALED 1-25	of well sealed
به مده شید بیده بیده هم» بیده هم» بیده شده بیده بیده بیده شده بیده شده بیده داده داده داده داده داده داده داده در است.			
PROPERTY OWNER 4/16/1/88/80		,	
ADDRESS 17 80x //39		WN. NT 07962	
WELL LOCATION RT 10 DONTH Street & No., Tow		THEEFORD KARGET) COUNTY
<u> </u>			04
Well No.		2	Block No.
USE OF WELL PRIOR TO ABANDONMENT	: COLLEGIO.	N HOIDT	
REASON FOR ABANDONMENT: 100	LONGER K	EQUILED	
WAS A NEW WELL DRILLED? ☐ YES	X NO	PERMIT # OF NEW WELI	
TOTAL DEPTH OF WELL DIAMETER CASPICE FORTH	Cross-section of sealed well	Draw a sketch showing distance and re nearest roads, buildings, etc.	lations of well site to
CASING LENGTH SCREEN LENGTH NUMBER OF CASINGS			2.
Gallons of Water Lbs. of Cement	8'NQ''	A STAN	The second second
Lbs. of Bentonite Lbs. of Sand/Gravel		AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)	∱N
(none if well is contaminated)		STATE PLACE COORDINATE IN US SURV	SY FEET
FORMATION: Consolidated Unconsolidated		OR LONGITUDE:	r 11
To permit adequate grouting, the casing should rebe removed. Pressure grouting is the only accept	emain in place, but u		
WAS CASING LEFT IN PLACE? YOU YES			
WERE OTHER OBSTRUCTIONS LEFT IN WI	ELL? DYES A	NO WHAT WERE THE OBSTRUCTION	ons: N/A
IF "YES", AUTHORIZATION GRANTED BY_			
Was an alternative decommissioning method used			
IF "YES", authorization granted by		ON	
I certify that this well was sealed in accordan			(Date) 2-17-05
Performing Work (Print or Type) ne of NJ Licensed Well Driller	PITTSTO	WN de 1 s 1 8867	19 Mailing Date
	Signature of N Lice	nsed Well Driller Performing Work	Registration #

DWR-020 7/02

New Jersey Department of Environmental Protection Water Supply Element - Bureau of Water Allocation

MAIL TO: Bureau of Water Allocation		WEL	LPERMIT # WONE
PO Box 426		DATE WELL SEALED _	of well sealed
Trenton, NJ 08625-0426	** ** ** **	is threat to the sales as as as which the threat threat threat	
PROPERTY OWNER EAKS / L) EEREC	MATERIA	hs sector ho	COILG, DUC.
ADDRESS PO BOX 1/39 MC	RUSTOWA	LNT 07962	
WELL LOCATION RT 19 LOCATION Street & No., Town		WAIREFOLD BE	EGEN ('OVNTY
516		2	104
Well No.	<u></u>	Lot No.	Block No.
USE OF WELL PRIOR TO ABANDONMENT	COURCIO	NPOINT	
REASON FOR ABANDONMENT: DO	LOWGER R	EQUIRED	
WAS A NEW WELL DRILLED? YES	NO	PERMIT # OF NEV	V WELL
TOTAL DEPTH OF WELL	Cross-section of sealed well	Draw a sketch showing distance nearest roads, buildings, etc.	e and relations of well site to
DIAMETER / S			
SCREEN LENGTH			
NUMBER OF CASINGS		XX /	NO CONTRACTOR OF THE PARTY OF T
MATERIAL USED TO DECOMMISSION WELL:		XX SON XXX	100
Gallons of Water Lbs. of Cement	8'X/8"		
		AS-BUILT WELL LOCAT	
Lbs. of Sand/Gravel (none if well is contaminated)	נא	(NAD 83 HORIZONTAL DA STATE PLACE COORDINATE IN U	71 O 1941
OGAIIONS USD	NORT	HING: EASTIN	G:
FORMATION: Consolidated Unconsolidated	LATITUDE:	' " LONGITU	DE:
To permit adequate grouting, the casing should ret be removed. Pressure grouting is the only accepte		ngrouted liner pipes or any other	obstructions must
		Angone	ares Dudo Fri
WAS CASING LEFT IN PLACE? TYPES [
WERE OTHER OBSTRUCTIONS LEFT IN WE	LL? DYES AN	O WHAT WERE THE OBSTI	RUCTIONS: \mathcal{U}/\mathcal{A}
IF "YES", AUTHORIZATION GRANTED BY_	/3.7.Th.7	P Official)	(Date)
Was an alternative decommissioning method used			
IF "YES", authorization granted by		O	***************************************
I certify that this well was sealed in accordance	ADVANCED!	DAMERING, INC	(Date)
LEGIC COLORS	JITTETAN	ITHUAUT N. N.I. 08867	2-17-05
rforming Work (Print or Type) me of NJ Licensed Well Driller	This	Address	Mailing Date
	gnature of NJ Licer	sed Well Driller Performing Wo	

DWR-090 7/02

New Jersey Department of Environmental Protection Water Supply Element - Bureau of Water Allocation

<u> </u>	<u> </u>		WIT # LOVE
MAIL TO: Bureau of Water Allocation		WELL PENI	of well sealed
PO Box 426 Trenton, NJ 08625-0426		DATE WELL SEALED 1-0	5-05
PROPERTY OWNER ENGLISHED	MATGRIA	S SECTOR HOLDIN	6.IXX.
Λ .	ORRISTOWN		
WELL LOCATION BT 17 WOLTH Street & No., Town	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	RUTHGREFOLD BERG	EN COUNTY
Succe & 110., 10wn	sinp, County	1	'אע
Well No.		Lot No.	Block No.
USE OF WELL PRIOR TO ABANDONMENT:	COUSETIL	ON POINT	
REASON FOR ABANDONMENT: 100 L	DIBER RE	OVICED .	
WAS A NEW WELL DRILLED? YES	NO	PERMIT # OF NEW WEL	L
TOTAL DEPTH OF WELL DIAMETER	Cross-section of sealed well	Draw a sketch showing distance and a nearest roads, buildings, etc.	elations of well site to
CASING LENGTH SCREEN LENGTH NUMBER OF CASINGS		OT WAR	Jen
ATERIAL USED TO DECOMMISSION WELL: Gallons of Water	8 % /8"	200 X 900'	Care Andrew
Lbs. of Cement Lbs. of Bentonite Lbs. of Sand/Gravel		(NAD 83 HORIZONTAL DATUM)	↑ N
(none if well is contaminated)		STATE PLACE COORDINATE IN US SURVIPLING: EASTING:	/EY FEET
FORMATION: Consolidated Unconsolidated	LATITUDE:	OR '" LONGITUDE:	d to
To permit adequate grouting, the casing should re- be removed. Pressure grouting is the only accepte	-	ingrouted liner pipes or any other obstru	octions must
WAS CASING LEFT IN PLACE? ☐ YES ☐			
WERE OTHER OBSTRUCTIONS LEFT IN WE	LL? DYES DY	NO WHAT WERE THE OBSTRUCTI	ons: <i>WA</i>
IF "YES", AUTHORIZATION GRANTED BY		ON	Date)
Was an alternative decommissioning method used	-		
IF "YES", authorization granted by	***************************************	ON	
I certify that this well was sealed in accordance	e with NJ.A.C3	EPIPIPILLING, INC COLTROAD	(Date)
P forming Work (Print or Type) se of NJ Licensed Well Driller	PITTS	FOWN NJ 08867	Mailing Date
· · · · · · · · · · · · · · · · · · ·	gnature of My Lice	nsed Well Driller Performing Work	Registration #

New Jersey Department of Environmental Protection Water Supply Element - Bureau of Water Allocation

MAIL TO: Bureau of Water Allocation PO Box 426		WELL P	ermit # <u>2649505</u> of well sealed
Trenton, NJ 08625-0426	and and the second seco	DATE WELL SEALED	
PROPERTY OWNER HULED SI	POAL TI	<u>C.</u>	
ADDRESS 101 COUMBIA	RD MO	eristown, NJ	•
WELL LOCATION MULLAY HILL Street & No., Towns		EAST RUTHFLE	IES BEEGNOY
MW-41 Well No.	Lot	· · · · · · · · · · · · · · · · · · ·	D4 Block No.
USE OF WELL PRIOR TO ABANDONMENT:_	MONITOR	106	
REASON FOR ABANDONMENT: LO	DIXER LE	OUILED	
WAS A NEW WELL DRILLED? YES	NO	PERMIT # OF NEW V	VELL
TOTAL DEPTH OF WELL DIAMETER CASING LENGTH SCREEN LENGTH NUMBER OF CASINGS	Cross-section D	raw a sketch showing distance a carest roads, buildings, etc.	
MATERIAL USED TO DECOMMISSION WELL: Gallons of Water Lbs. of Cement Lbs. of Bentonite	5.5	AS-BUILT WELL LOCATIO	Elsev Care
Lbs. of Sand/Gravel QUIONS U Sensorie if well is contaminated) FORMATION: Consolidated Unconsolidated	NORTHII	(NAD 83 HORIZONTAL DATU ATE PLACE COORDINATE IN US S NG: EASTING: OR UNGITUDE	SURVEY FEET
To permit adequate grouting, the casing should repete removed. Pressure grouting is the only accepte	main in place, but ung	routed liner pipes or any other of	
WAS CASING LEFT IN PLACE? YES	ino casing	MATERIAL PVC	
WERE OTHER OBSTRUCTIONS LEFT IN WE	LL? OYES ONO	WHAT WERE THE OBSTRU	CTIONS U/A
IF "YES", AUTHORIZATION GRANTED BY		ON	
Was an alternative decommissioning method used	(NJDEP of and/or approval to dec	,	(Date) ficial? □YES □NO
IF "YES", authorization granted by	ADVANCED	DRILLING, INCON	(Date)
I certify that this well was sealed in accordance 5. ALBELALIA	e with NJA CON	THOAD N, NJ 08867	4-14-25
Performing Work (Print or Type) Name of NJ Licensed Well Driller	ON Sau	Address	Mailing Date 7/300
Si	gnature of NJ License	d Well Driller Performing Work	Registration #
COPIES: White - Water Allocation	Yellow - Owne	er Pink - Health Dept.	Goldenrod - Driller

WELL ABANDONMENT REPORT

MAIL TO: Bureau of Water Allocation		WELL	PERMIT # DINE	
PO Box 426			of well sealed	
Trenton, NJ 08625-0426		DATE WELL SEALED	4-10-05	
PROPERTY OWNER ALLISA SIGNA			We do	
ADDRESS 101 COLUMBIA RD	mollis	TU , WOOTE		
WELL LOCATION RT 10 LOCATION Street & No., Towns		RUTHERFOLD -	BELGED CTY	
,	····· _• , ·······,)	Ind	
MW-4T Well No.		Lot No.	Block No.	
USE OF WELL PRIOR TO ABANDONMENT:	_			
REASON FOR ABANDONMENT: DO U	DWEL LE	-OU) 1851		
WAS A NEW WELL DRILLED? D YES	NO		V WELL	
TOTAL DEPTH OF WELL 15'	Cross-section of sealed well	Draw a sketch showing distance nearest roads, buildings, etc.	e and relations of well site to	
DIAMETER 211	or scarcu wer	, ,	>	
CASING LENGTH SCREEN LENGTH			E.	
NUMBER OF CASINGS		1/2 1/2	A CO	
MATERIAL USED TO DECOMMISSION WELL:			HE CONTRACTOR	
2		1X5\A		
Gallons of Water Lbs. of Cement	- F	87 MW	-4I V	
Lbs. of CellientLbs. of Bentonite		AS-BUILT WELL LOCAT		
Lbs. of Sand/Gravel	N.	(NAD 83 HORIZONTAL DA STATE PLACE COORDINATE IN U	11 01/4)	
gallons U (none if well is contaminated)		THING: EASTIN		
FORMATION: Consolidated		OR		
Unconsolidated	LATITUDE:	'' LONGITU	DE:	
To permit adequate grouting, the casing should respect to be removed. Pressure grouting is the only accepted	nain in place, but i d method.	ingrouted liner pipes or any other	obstructions must	
WAS CASING LEFT IN PLACE? YES	1	NG MATERIAL: OVERNUL	LENREMOURD PUC	
WERE OTHER OBSTRUCTIONS LEFT IN WEI			11/0	
•			KOCHONS. 10 Jr 1	
IF "YES", AUTHORIZATION GRANTED BY		ON EP Official)	(Date)	
Was an alternative decommissioning method used and/or approval to decommission granted by a DEP official? VES NO				
IF "YES", authorization granted by	ARY	ANCED DRILLING, IN O	N(Date)	
I certify that this well was sealed in accordance	e with N.J.A.Co	490-7641199: NJ 0886:	(Date)	
Performing Work (Print or Type)			4-14-05	
Name of NJ Licensed Well Driller	CON A U	Willalla	J/350	
Si	gnature of NJ Lice	nsed Well Driller Performing Wo	rk Registration #	
COPIES: White - Water Allocation	Yellow - Ov	vner Pink - Health Dept.	Goldenrod - Driller	
1672				

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WELL ABANDONMENT REPORT

MAIL TO: Bureau of Water Allocation	WELL PERMIT # NONE
PO Box 426	of well sealed
Trenton, NJ 08625-0426	DATE WELL SEALED 4-13-05
PROPERTY OWNER ALLIED SIGN	M HXC.
	·····
ADDRESS [1] COLUMBIA KE	MOLLISTOWN, NJ
WELL LOCATION RT 17 10007	+ EAST RUTHERFORD BELGEN CH
Street & No., Town	
MW-5I	2 104
Well No.	Lot No. Block No.
	MAG 2
	MONITORING
REASON FOR ABANDONMENT: DO U	ONGEL REQUIRED
WAS A NEW WELL DRILLED? YES	NO PERMIT # OF NEW WELL
TO A THE TRIBLED CONTRACTOR IN THE PARTY OF	Cross-section Draw a sketch showing distance and relations of well site to
TOTAL DEPTH OF WELL 15	of scaled well nearest roads, buildings, etc.
DIAMETER 4" CASING LENGTH	
SCREEN LENGTH	2
NUMBER OF CASINGS	1 Epilon 1 Skin
March 12 March to Brook A forton March 1	
MATERIAL USED TO DECOMMISSION WELL:	151 FED MW-5I
Gallons of Water	Ball BAMW-AT
Lbs. of Cement	15' MW-5I
Lbs. of Bentonite	AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)
Lbs. of Sand/Gravel	NJ STATE PLACE COORDINATE IN US SURVEY FEET
1 Gallons (SE) well is contaminated)	NORTHING: EASTING:
FORMATION: Consolidated	l OR i
Unconsolidated	LATITUDE: " LONGITUDE: "
To permit adequate grouting, the casing should re-	main in place, but ungrouted liner pipes or any other obstructions must
be removed. Pressure grouting is the only accepte	
WAS CASING LEFT IN PLACE? YES	INO CASING MATERIAL OVELDEILLED/REMOUED PUC
White of the operation of EET IN ME	LL? DYES DNO WHAT WERE THE OBSTRUCTIONS:
WEKE OTHER ORSTRUCTIONS CELL IN WE	EL CIES LINO WINI FLICTIE OBOTHOUSE
IF "YES", AUTHORIZATION GRANTED BY	ONON
It	(NJDEP Official) (Date) and/or approval to decommission granted by a DEP official? YES NO
was an atternative decommissioning method used	
IF "YES", authorization granted by	(A.CYTYPY) (A.C.C
I certify that this well was sealed in accordance	ADVANCED DENISTING, INC
Performing Work (Print or Type)	Maline Date
Name of NJ Licensed Well Driller	ignature of NJ Licensed Well Driller Performing Work Registration #
• u	
COPIES: White - Water Allocation	n Yellow - Owner Pink - Health Dept. Goldenrod - Driller
l , m m	

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